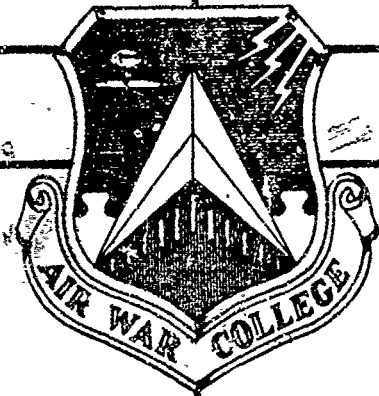


DTIC FILE COPY

(2)



AIR WAR COLLEGE

RESEARCH REPORT

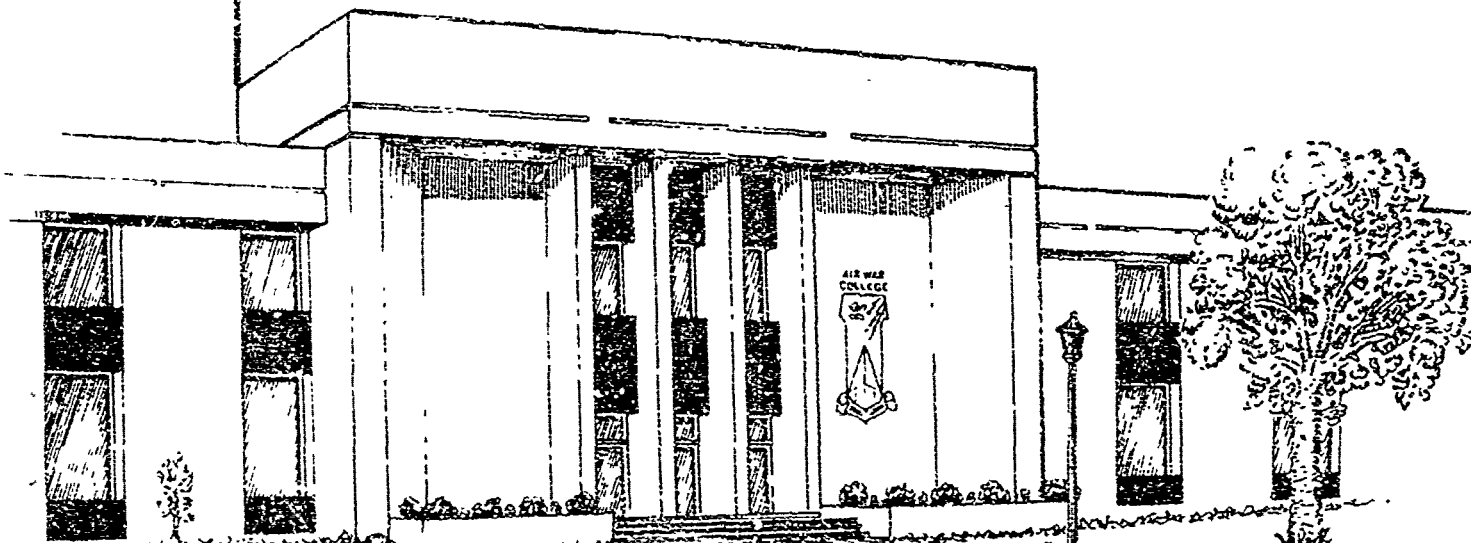
AD-A202 715

OUT OF THE CLOSET:
COUNTERINSURGENCY DOCTRINE FOR THE USAF

DTIC
ELECTE
JAN 1 2 1989
S & D

LT COL DONALD H. FELD

1988



69 1 11 047
AIR UNIVERSITY
UNITED STATES AIR FORCE
MAXWELL AIR FORCE BASE, ALABAMA

APPROVED FOR PUBLIC
RELEASE; DISTRIBUTION
UNLIMITED

AIR WAR COLLEGE
AIR UNIVERSITY

OUT OF THE CLOSET: COUNTERINSURGENCY DOCTRINE FOR THE USAF

by

Donald H. Feld
Lieutenant Colonel, USAF

RESEARCH REPORT SUBMITTED TO THE FACULTY
IN
FULFILLMENT OF THE RESEARCH
REQUIREMENT

Research Advisor: Dr. James A. Mowbray

MAXWELL AIR FORCE BASE, ALABAMA

April 1988



Accession For	
NTIS CRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Availability Codes
A-1	

DISCLAIMER

This research report represents the views of the author and does not necessarily reflect the official opinion of the Air War College or the Department of the Air Force. In accordance with Air Force Regulation 110-8, it is not copyrighted but is the property of the United States government and is not to be reproduced in whole or in part without permission of the commandant, Air War College, Maxwell Air Force Base, Alabama.

Loan copies of this document may be obtained through the interlibrary loan desk of Air University Library, Maxwell Air Force Base, Alabama 35112-5564 (telephone: [205] 293-7223 or AUTOVON 875-7223).

AIR WAR COLLEGE RESEARCH REPORT ABSTRACT

TITLE: Out of the Closet: Counterinsurgency Doctrine for the USAF

AUTHOR: Donald H. Feld, Lieutenant Colonel, USAF

—A study of historical examples of the use of air power in counterinsurgency warfare in order to derive principles, mission types, and aircraft characteristics to serve as the basis of a counterinsurgency doctrine for the USAF. In the view of the author, insurgencies in allied countries continue to be a problem with which the U.S. must contend. The use of air power has been an important factor in counterinsurgency warfare since the first example of its use in the Mexican expedition in 1916. The subject of counterinsurgency has been kept in the closet or not discussed since the Vietnam war. USAF doctrine for counterinsurgency is out of date and with the renewed attention brought on by the failure of the Iran rescue mission, it is in need of review and revision. The author contends that the subject of counterinsurgency should come out of the closet and be discussed in the open to develop a USAF doctrine for the conduct of counterinsurgency type operations. (FR)

BIOGRAPHICAL SKETCH

Lieutenant Colonel Donald H. Feld (B.S. Electrical Engineering, Iowa State University, and M.E. Operations Research, University of Florida) has been interested in counterinsurgency type operations since his tour in Vietnam flying A-1 Skyraider attack aircraft. During his tour he flew as a Sandy Low Lead on several rescue missions and regularly flew attack, forward air control, and escort for infill/exfill missions in support of counterinsurgency type operations. His efforts in Vietnam earned him the Distinguished Flying Cross with one oak leaf cluster for heroism and seven Air Medals. He qualified for and entered the U-2 program at Beale AFB in 1979 and flew the "Dragon Lady" till 1983 when he went to England to attend the RAF Staff College at RAF Bracknell. From Bracknell, in 1984, he went to RAF Alconbury to fly TR-1s, and finished his tour there in June of 1987 as the commander of the 95th Reconnaissance Squadron. In flying the U-2/TR-1, he was also involved in reconnaissance missions in support of counterinsurgency type operations.

TABLE OF CONTENTS

CHAPTER	PAGE
DISCLAIMER.	ii
ABSTRACT.	iii
BIOGRAPHICAL SKETCH	iv
I INTRODUCTION.	1
Counterinsurgency Definitions	2
Low Intensity Conflict.	2
Foreign Internal Defense.	4
Insurgency.	4
Counterinsurgency	5
Need for Discussion	7
Need for Doctrine	9
Assumptions	10
II SEARCH FOR PRINCIPLES	11
The Punitive Expedition Into Mexico (1916).	11
The British Air Control Experience (1920-1960).	12
Nicaragua (1927-1933)	15
Philippines: Huk Campaign (1946-1954)	17
Greece (1947-1949).	19
Malaya (1948-1960).	20
Korea (1945-1953)	23
Laos (1960-1973).	25
Algeria (1954-1962)	28
Oman (1964-1975).	29
Vietnam (1961-1973)	31
Morocco (1975-present).	36
General Principles.	40
III CONCLUSION.	43
Principles.	43
Missions.	47
Characteristics	51
Simple.	51
Supportable	52
Suitable.	53
Survivable.	54
Summary	56
APPENDIX: Conflict Spectrum	57
LIST OF REFERENCES.	58

CHAPTER I

INTRODUCTION

"There are two things that a democratic people will always find difficult, to begin a war and to end it."

Alexis de Tocqueville

That statement is the heart of the problem that this paper addresses. Not only are Americans reluctant to enter a war, in this case they are unwilling to discuss it by name. The type of war to be discussed is--counterinsurgency--a subject kept in the closet in America since the end of the Vietnam war. The reasons behind America's rejection of counterinsurgency lie in the definition of the "Vietnam Syndrome." Simply stated by Michael T. Klare in his book Beyond the "Vietnam Syndrome", "...the "Vietnam Syndrome" is the American public's disinclination to engage in further military interventions in internal Third World conflicts." Americans avoid interventionist policies because they might get the U.S. involved in another Vietnam. (1:1; 2:5) Vietnam was a long, bloody, expensive, and internationally embarrassing war for the American people; and they want to avoid thinking or talking about any topic that might get them involved in such a conflict again. The word counterinsurgency vividly describes the military priorities of the Kennedy era that led the U.S. into the war in Vietnam. After Vietnam, as a result of America's rejection of the war, the word counterinsurgency disappeared quickly from military language, and Washington adopted a new foreign policy of negotiation and non-interventionism. (1:83; 3:9) As a result of this rejection by the

public, counterinsurgency doctrine in the military, and in the Air Force in particular, has deteriorated. A thorough study is needed to determine principles for the basis of a new and invigorated counterinsurgency doctrine. (4:243-245) Today, experts agree the most probable conflict the U.S. could become involved in is a counterinsurgency. (5:9; 6:20; 7:59) In light of this threat, Americans must take the subject of counterinsurgency out of the closet and discuss it. This paper examines historical examples of the use of air power in counterinsurgencies in order to derive principles for an Air Force doctrine; to determine the types of missions used in a counterinsurgency; and to define the desired characteristics of the force structure required to support a USAF doctrine for counterinsurgency. (4:243,245) Reader beware! This introduction is long, but necessary to set the stage for the analysis of the historical examples that follow. So first, some definitions of terms.

Counterinsurgency Definitions

The purpose here is to define the terms that surround this subject, and to explain the reasons why counterinsurgency is a taboo subject for Americans. In documentation today and in the language of civilian and military agencies of the government, terms such as Low Intensity Conflict and Foreign Internal Defense are used in lieu of counterinsurgency. These terms will be defined first.

Low Intensity Conflict

The concept of Low Intensity Conflict (LIC) is normally defined by arranging all the probable levels of conflict along a spectrum from the

lowest intensity of military aid or employment of non-combat forces through to general nuclear war. (see appendix) The range of conflicts from the lowest end up to conventional war is then described as LIC. (4:237) The Joint Chiefs of Staff approved definition, which has been adopted by the Joint Army/Air Force Center for Low Intensity Conflict at Langley AFB, Virginia, is as follows:

A limited politico-military struggle to achieve political, social, economic, or psychological objectives. It is often protracted and ranges from diplomatic, economic, and psychosocial pressures through terrorism and insurgency. LIC is generally confined to a geographical area and is often characterized by constraints on weaponry, tactics, and the level of violence. (8:80; 9:15)

Under this umbrella of LIC, the Army in their Training and Doctrine Command (TRADOC) Pamphlet 525-44, titled US Army Operational Concept for Low-Intensity Conflict defines four specific types of operations. They include: (1) Peacekeeping Operations--such as the US Military Observer Group performs as a part of the United Nations Truce Supervision Organization between the Israelis and the Arabs; (2) Peacetime Contingency Operations--politically sensitive military operations such as the operation in Grenada; (3) Terrorism Counteraction; and (4) Foreign Internal Defense (FID). Counterinsurgency is a subset of FID which will be defined next. As a subset, counterinsurgencies are the largest and most probable example of LIC to occur in the world. Frequently, the term counterinsurgency is used interchangeably with LIC. This is a mistake. LIC consists of the many types of operations described above. Instead of having one doctrine for LIC, there should

be separate doctrines for peacekeeping, counterterrorism, and one for counterinsurgency. (10:5)

Foreign Internal Defense

Foreign Internal Defense (FID) is defined by the Army as, "Participation by civilian and military agencies of a government in any of the action programs taken by another government to free and protect its society from subversion, lawlessness, and insurgency." (11:14) When a another government tries to "...free and protect its society from...insurgency," it normally resorts to counterinsurgency. This is why counterinsurgency is a subset of FID. FID and Internal Defense and Development (IDAD) are both U.S. Army terms frequently substituted when counterinsurgency is the topic of discussion. Tactical Air Command Manual (TACM) 2-1 in particular uses the phrase FID to describe what are essentially counterinsurgency operations. (12:54)

Insurgency

Before defining counterinsurgency, it is important to define insurgency. An insurgency is a protracted political-military activity directed at completely or partially controlling a country through the use of irregular military forces and illegal political organizations. Insurgent activity, including guerrilla warfare, terrorism, propaganda, recruitment, covert party organization, and international activity, is designed to weaken the target government's control and legitimacy while increasing insurgent control and legitimacy. (13:2)

Insurgencies normally pass through four common stages of development. Those stages are: (1) preinsurgency--leadership emerges in response to

domestic grievances or outside influences; (2) organizational--infrastructure is built, guerrillas recruited and trained, supplies acquired, and domestic and international support is established; (3) guerrilla warfare--hit-and-run, terrorist, and low-level military tactics used by small units to attack the government; (4) conventional warfare--large units used in conventional warfare. Not all insurgencies experience every stage. The sequence may not be the same and some stages may extend over long periods of time. (13:3)

Counterinsurgency

Counterinsurgency (COIN) warfare is the antithesis of Clausewitz's idea that the center of gravity in war is the defeat and destruction of the enemy armed forces. In a COIN war, the center of gravity is the political-social system and the primary goal is not to destroy the enemy but to preserve the government. (14:12) Probably the most important concept for Americans to understand in dealing with insurgencies and counterinsurgencies is that they are asymmetrical with respect to their relationship to American involvement. For the insurgents, the conflict is total war for survival. For the counterinsurgents, it could evolve into a war for survival. For the U.S., involvement means limited objectives. (14:13) Considering these factors, if the U.S. decides to get involved in a counterinsurgency, its use of military power and its military goals should be limited while its use of political power should be unbounded. (15:5)

There are seven military factors which are critical to a government's ability to mount a successful counterinsurgency.

They are: (1) leadership--the professionalism of a country's military force; (2) tactics and strategy--the ability to employ unconventional strategies and tactics; (3) military intelligence--the ability to collect, process, analyze, and exploit intelligence on the insurgents; (4) troop discipline--the quality of the relationship between soldiers and the population; (5) civil-military relations--the ability of the civilian authorities to influence military operations; (6) popular militia--the ability to establish and maintain a popular militia to assist the military in maintaining security; and (7) air and naval support--the quality of air and naval support to the government's ground forces. (13:13) This last factor is what this paper is about. The intent is to aid in the development of a USAF doctrine that can provide quality support to any nation involved in a counterinsurgency.

Why do Americans find counterinsurgency abhorrent? First of all, counterinsurgencies are ambiguous. It is often difficult to separate the good guys from the bad. Unfortunately, the insurgent cause is often more closely aligned to the moral and ethical principles of American democracy than those of the existing indigenous government. We were born of a revolution and tend to empathize with revolutionaries, particularly those who characterize themselves as nationalists. Secondly, counterinsurgencies usually involve unconventional warfare where political, social, and psychological requirements dictate questionable strategies with obscure purposes. Political assassinations, ambushes, hit and run raids, and political and psychological intimidation are the operational modes.

Americans, particularly American soldiers, raised in a culture that stresses the importance of human life, human rights, and moral and ethical behavior, find it difficult to cope with this kind of warfare. (4:239-240) Finally, counterinsurgencies usually develop into protracted wars of attrition sometimes lasting decades. History shows that democracies do not cope well with long wars and excessive casualties. Democracies, particularly the U.S., find it difficult to maintain a public consensus to continue such wars. Lack of public support can quickly translate into resistance against the conflict which has a negative effect on the morale and effectiveness of U.S. forces. (5:45) Now that we have reviewed what counterinsurgency is and why Americans are reluctant to get involved, let us look at why we need to discuss counterinsurgency.

Need for Discussion

After Vietnam, many units of the Army's Green Berets, the Navy's Sea/Air/Land commandos (SEALs), and the Air Force's Special Operations Force (SOF), which were formed to conduct the counterinsurgency in Vietnam, were disbanded or reduced in strength. Since the beginning of the Iranian hostage crisis, there has been a spectacular rebirth of interest in these types of "Special Operations Forces." (1:84) Recent legislation established an Assistant Secretary of Defense for Special Operations/Low Intensity Conflict (ASD SO/LIC) and the U.S. Special Operations Command (USSOC). The USSOC will incorporate Special Operations Forces (SOFs) from every branch of the military to include the Army's Delta Force, Rangers, and Green Berets; the Navy's SEALs; and

the Air Force's Special Operations Force, the 23rd Air Force at Hurlburt Field in Florida. (16:32; 17:43; 18:8) With this renewed interest and the increased budgets that are promised SOFs, there is a need to discuss their missions and the doctrine that will shape their force structures.

The Third World contains three-fourths of the world's population and most of the world's political and economic problems. Very few Third World nations have been able to protect themselves from insurgencies. (19:3) A recent USAF study called Air Force 2000 forecasts LIC as the most likely occurrence between now and the year 2000. (20:83) Potential COIN battlefields for the newly formed USSOC include: El Salvador and Honduras in Central America; Oman where the ruler is still besieged by communist insurgents; The Western Sahara where Morocco faces determined insurgents in the Polisario; Angola, Zaire, Chad, and the Sudan all present possible conflicts in Africa; and Southeast Asia where long-simmering guerrilla conflicts in Burma, Thailand, Indonesia, and the Philippines may erupt and U.S. intervention would be requested. (1:91-93) Clearly, there is a need to begin discussions of COIN warfare and how to conduct it.

In the appendix is a chart, developed by Sam C. Sarkesian, that shows the conflict spectrum in relation to the U.S. credibility and capability spectrums. What this chart illustrates is the generally held belief that America's credibility and capability to perform the middle range of the conflict spectrum or counterinsurgency is low and poor respectively. (4:238; 20:21; 21:6) If you combine this knowledge, with the usual probability diagrams that show the highest probability for

conflict is in the lower end of the spectrum then you have more evidence supporting the need to discuss counterinsurgency. In order to improve the credibility and capability of the Air Force to perform counterinsurgency we need sound doctrine.

Need for Doctrine

The dictionary defines doctrine as "a particular principle, position, or policy taught or advocated." In the military, doctrine provides a common framework and a repository of principles under which training is conducted and through which strategy and tactics can be formed. (19:238) It also provides a guide for determining force structure. With renewed interest in LIC, COIN, and special operations forces, and the increase in budgets, the one mistake we cannot make is to start buying force structure without having the guidance of a sound doctrine.

In 1982 a USAF Inspector General report on world-wide special operations capabilities stated that USAF SOF units were impeded by dated guidance. Air Force Manual (AFM) 2-5, Aerospace Operational Doctrine--Tactical Air Operations--Special Air Warfare, was published 10 March 1967 and has not been updated since. It refers to organizations and capabilities that are no longer available. 1ACM 2-1 Aerospace Operational Doctrine--Tactical Air Operations mentioned earlier, is dated 15 April 1978. All of the Air Force manuals for SOF doctrine are woefully out of date. (3:111; 20:36)

The number one priority on the list of things to do for the new Commander in Chief of the USSOC is the development of doctrine for

special operations forces. (22:51) To avoid making the mistakes of the past in developing doctrine for the future, we should look at historical examples of counterinsurgencies to ascertain the principles that will serve as the basis of a doctrine for the use of air power in counterinsurgencies. (21:7; 23:25)

Assumptions

Several assumptions were made in performing this study and they should be explained and understood prior to discussing it. Throughout the study, it was assumed that an Air Force counterinsurgency doctrine developed from the principles derived would be used by the U.S. to support another country's counterinsurgency efforts not our own. The support thus envisioned is assumed to take one of three forms: (1) assistance or aid, such as providing training and or equipment; (2) integration of U.S. forces into the forces of the supported country; or (3) intervention of U.S. special or conventional forces. It is assumed that the insurgents do not have an air force of their own. Finally, it is assumed that the insurgency is confined to one country. With these assumptions understood, let us look at historical examples of the use of air power in counterinsurgency warfare.

CHAPTER II

SEARCH FOR PRINCIPLES

In order to build a doctrine for the use of air power in counterinsurgency, the basic principles that make up that doctrine have to be determined. Those principles are embodied in the historical experiences of many nations who used air power in COIN situations. Vietnam was not the first nor will it be the last example of U.S. involvement in a counterinsurgency. Earliest examples in American history of involvement in unconventional wars include the Second Seminole War (1835-1842) and the Philippines War and the Moro Wars (1899-1914). The first examples of the use of aircraft in such conflicts in American history were the punitive expedition into Mexico (1916) and the Nicaraguan/Sandino affair (1927-1935). (19:135) This chapter will present 15 separate American and foreign COIN situations or conflicts in which air power was used either successfully or unsuccessfully. There is no intent to go into the historical facts of each COIN effort in full detail. The intent is to explain how air power was used and to distill from that information basic guiding principles. Missions or roles that COIN forces would be expected to perform and the characteristics of a force structure for a COIN doctrine will also be determined and listed.

The Punitive Expedition Into Mexico (1916)

On the 9th of March 1916, Francisco "Pancho" Villa raided Columbus, New Mexico. On the raid he killed 17 Americans so the U.S. government

ordered General John "Black Jack" Pershing to pursue Villa into Mexico and "take him dead or alive." The 1st Aero Squadron (1st AS) commanded by Captain Benjamin Foulois with 8 Curtiss JN-3s was ordered to join Pershing on the expedition into Mexico. Using the squadron, Pershing was able to track Villa, and to maintain command and control by delivering messages to his widely dispersed forces. Elevation, range, and speed were the unique characteristics of the 1st AS aircraft that made visual reconnaissance and communications their most significant contributions to the Mexican operation. (24:18)

The first recorded uses of American aircraft in a COIN operation were for reconnaissance and liaison. These missions, as seen repeatedly later on, remain two of the most important missions for air power in counterinsurgency. Captain Foulois did encounter some difficulty with his aircraft which were ill-equipped for combat in the hostile terrain of the Southwest. Propellers cracked and flew apart in the dry heat of the desert. Shops had to be set up and new props designed and built. (24:18) This points to other important aircraft characteristics--they must be adaptable to various climates and supportable in those environments. The 1st Aero Squadron was successful in its support of the counterinsurgency. It logged more than 700 sorties and even scored the first recorded kill of a guerrilla leader from the air. (24:18)

The British Air Control Experience (1920-1960)

During his Palestine campaign against the Turks, British Colonel T.E. Lawrence used aircraft extensively to provide his forces with mobility in the vast desert. Using aircraft, he maintained contact with

his widely dispersed troops, provided reconnaissance, hauled men and supplies, and attacked Turkish communications. This use of aircraft to support these unconventional operations was the precursor of an innovative use of air power by the British after the war called "Air Control". (24:19)

In Somaliland Mohammed bin Abdullah Hassan, the "Mad Mullah", had been pillaging eastern Africa since 1899. By 1920, the British army had struggled for 15 years and not controlled the Mad Mullah. The Royal Air Force (RAF), drastically reduced in size after WWI, was struggling for its existence under threat of being absorbed by the other senior services. Sir Hugh Trenchard (often called the father of the RAF) seeing an opportunity, proposed to Winston Churchill that air power tactics like those used by Lawrence could be used to control the situation in Somaliland. A successful campaign, using 12 de Havilland 9a aircraft, neutralized the Mullah in three weeks for 77,000 pounds sterling. The British general staff had estimated it would take 12 months, two divisions, and millions of pounds to do the job. (3:20)

In 1920, in Iraq the British were faced with an uprising they could not control with 60,000 troops and over 38 million pounds annually. In 1922, the RAF was given the task of controlling Iraq and continued to provide colonial control for the British in the Middle East until 1960. (24:19)

The principles used by the British to accomplish these feats were relatively simple, but they could form the basis of an air power doctrine for counterinsurgency. The key, as articulated by Air Chief

Marshall Saundby in 1936, was that the purpose of air control was "to support the political authorities in their tasks of pacification or administration." (3:22-23) Military commanders had to work in close cooperation with civilian leaders, because of the political nature of the concept. The primary principle of "air control" was the pacification of the enemy with minimum loss of people and material on both sides. This was accomplished by interrupting the normal life of the insurgents thereby causing them to cease their hostile acts. One method to accomplish this was called an "inverted blockade," which meant using aircraft to keep insurgents away from their homes and lands until they came to terms with the ruling government. (3:23; 24:19)

There were several key tenets of air control doctrine. The foremost was a need for good intelligence which was supplemented by airborne reconnaissance. This intelligence and command information was often delivered by aircraft. However, all on-scene commanders were given the authority to act independently if they were cut off. Another innovation was the use of aircraft dropping leaflets and carrying airborne loudspeakers (psychological warfare) to keep the insurgents informed of the intentions of the British and to encourage surrender. The final tenet, the humanitarian use of air power, was in keeping with the idea of minimal violence. After a successful air control campaign, the aircraft were used to fly in doctors and to fly out seriously wounded insurgents. (3:24-25)

Missions that can be added to the list by the "air control" experience are transport, attack, psychological operations (Psy Ops),

and medical evacuation (Medevac) or humanitarian support. The characteristics of height, range, and speed still apply, however, to accomplish the strike mission and stay within the concept of minimal damage required accuracy of weapons delivery. To provide a capability to haul troops, litter patients, and supplies, a minimum cargo capacity is required, and finally, support of Psy Ops required an aircraft with loiter time.

Nicaragua (1927-1933)

In 1927, U.S. Marines intervened in Nicaragua to participate in the COIN campaign against Augusto Sandino. The battles that ensued recorded many firsts for the U.S. and Marine aviation. The first organized dive bombing attack in history on 16 July 1927 was successful when Marine aviators fired 4,000 rounds of ammunition and dropped 27 bombs to kill over 100 men and defeat an attack by Sandino on the Marine garrison at Ocotal. This attack also marked the first rescue of a blockaded town by air power. Later, in November of 1927, Marine reconnaissance aircraft located Sandino's mountain headquarters and Marines began bombing it almost daily. This marked the first attack on a fortified position by air unsupported by ground troops. (25:85-89)

Although these attacks were successful, the insurgents learned several valuable lessons. Sandino learned to use ambushes, to use sudden instead of open attacks, to use camouflage, to travel at night, to travel in smaller groups, and to secure the support of the local people for warning. He also developed a crude form of antiaircraft defense using machine guns and incendiary rocket barrages. (25:88,89,92)

Even at this early stage aviators had to contend with antiaircraft defenses.

Unfortunately, the indiscriminate nature of Marine attacks tended to alienate the population and drive more people into Sandino's camp. Another first was the use of aircraft for observation missions. Marine aircraft flew regular armed patrols over isolated outposts, ground patrols, and supply trains to provide warning and support. Both reconnaissance and observation missions were hampered by the noise of the aircraft which often alerted the enemy. (25:89)

Again, aircraft were used in a communications role to provide command and control of widely dispersed operations and in a transportation role to provide support. Rough terrain and jungle made communication and transportation by aircraft a valuable contribution to the effort.

Another U.S. first in January of 1928, was the use of an aircraft as an air ambulance in combat. This was accomplished by equipping a Vought Corsair with de Havilland wheels to allow it to fly in and out of a 200 yard field constructed at the battle site. The aircraft carried medicine and supplies in and wounded out. (25:90) This emphasizes once again the need for aircraft that are simple enough to be modified in the field to meet emergencies.

Nicaragua also saw the first use in 1932 of the "autogiro" a predecessor to the helicopter. Unfortunately, it still needed a small takeoff run and it could only carry two people and 50 pounds of cargo. (25:91) These operations, however, pointed out the value of a vertical

takeoff and landing (VTOL) or short takeoff and landing (STOL) aircraft. Marine aircraft also conducted Psy Ops dropping leaflets to try and influence the will of the Sandinistas. (25:91)

Two COIN principles were highlighted by this conflict. First, air power is most effective when used in close cooperation with ground troops. (24:21; 25:85,92,93) Second, the destructive force of air power must be used discriminately to avoid alienating the indigenous population. (25:85,92,93) New missions identified in this conflict included aerial observation and combat evacuation. Aircraft characteristics that were identified included: survivability against antiaircraft defenses, ability to operate at night when the enemy is moving, silent operations to catch the enemy unaware, and VTOL or STOL capability to take advantage of the typical short or undeveloped runways available in third world nations. Accuracy of weapons delivery, a characteristic previously mentioned, was emphasized again in this conflict.

Philippines: Huk Campaign (1946-1954)

The Huks were a Communist group that operated as the "People's Anti-Japanese Army" during World War II. After the war, with weapons captured during the war, the Huks continued to fight. They tried to overthrow the newly formed democratic government of the Philippines. Their support came mainly from rural people dissatisfied with land reform, government inefficiency, and corruption. From 1946 until 1950 the Huks waged a successful communist insurgency against the Philippine government. In 1950 the newly appointed Secretary of National Defense,

Ramon Magsaysay, with the help of U.S. aid and advisors, began a successful campaign against the Huks that ended in 1954. (24:23)

Magsaysay's COIN program was a careful balance between military pursuit of the insurgents and attention to the needs of the peasant population that supported the Huks. Magsaysay removed ineffective officials and reorganized the military. In reorganizing the military, he stressed the importance of supporting the political objective of his campaign against the Huks, which was to win popular support of the people back from the insurgents. Magsaysay's strategy was probably the first example of a "hearts and minds" approach to counterinsurgency.

The Filipinos had attack aircraft but because of their destructive power and Magsaysay's strategy they were used very sparingly. The air force was not a decisive factor in the campaign. The C-47s, liaison aircraft, P-51s, and AT-6s of the Philippines air force were used primarily for reconnaissance, Psy Ops, and light attack missions in support of ground troops. Attacks by aircraft using 100-pound bombs and .50-caliber machine guns were limited to large Huk base camps in the mountains. These attacks were carefully controlled and only approved if commanders were sure that no civilians would be involved. (24:23; 26:23-40)

The two principles for the use of air power to come out of this campaign were similar to those of the British air control experience. The subordination of the military to the political solution and the limited or minimal use of violence in air attacks. Missions or roles again included liaison, Psy Ops, and reconnaissance confirming their

importance in any counterinsurgency. This successful counterinsurgency does point out that air power is not essential for victory but as one element of national power it can play an important role in support.

(24:23)

Greece (1947-1949)

The U.S. involvement in the Greek civil war was its first encounter with a communist insurgency. The Greek government began in 1947 and by 1949, with the help of the U.S., it had successfully defeated the efforts of the Greek communist party (KKE) to take over Greece. The U.S. contribution consisted of logistic support, training, equipment, advisory services, and economic aid. In 1948, the KKE in an effort to secure a quick victory conventionalized their forces and attempted to defeat the Greek army. This is usually the third stage of an insurgency. Unfortunately, the KKE was premature in going to this stage. They were not prepared, and they were subsequently defeated by a Greek army that had fortunately reached its peak. U.S. military support was largely conventional and therefore we learned very little about fighting a true communist insurgency. (26:22-23)

The Greeks used air power for two types of operations: the destruction of guerrilla forces and the direct support of ground troops. Three types of missions were used to destroy guerrillas: preplanned attacks using intelligence, armed reconnaissance, and the use of reconnaissance aircraft to locate targets and then stay on station to direct follow-on aerial attacks (possibly the first use of the "forward air controller" concept). Occasionally, due to the difficulty of target

identification, innocent civilians were attacked. Aerial support of ground troops was provided by command liaison, tactical reconnaissance, observation, artillery spotting, photography, resupply, Psy Ops, and close air support missions. (27:106) Due to the rugged mountainous terrain of Greece, air power often served the ground troops as "flying artillery." Two factors that allowed air power to play such an important part of this struggle were: the conventional nature of the conflict, and the lack of a credible KKE air defense capability. (27:107-108)

This conflict is the first of several to be reviewed that start as insurgencies and end as conventional wars. An important principle highlighted by comparing the Greek experience with the Philippine experience, is that the offensive capability of air power can contribute more to the success of a conventional conflict than a counterinsurgency. Three roles added to the list by the Greeks include: armed reconnaissance, forward air control, and close air support. Again, one of the prime characteristics of successful COIN aircraft has to be their ability to adapt to various terrains such as the rugged mountains of Greece.

Malaya (1948-1960)

The British in Malaya in 1948 were faced with a communist insurgency very similar in many respects to the Philippine experience. During WWII, the Malayan Communist Party (MCP), made up ethnically of Chinese people, fought as the Malayan Peoples Anti-Japanese Army (MPAJA) alongside the British and Malay people against the Japanese in Malaya.

After the war, the MPAJA turned only a portion of their weapons in and kept the rest. Gradually the old MCP returned and in 1948 it began a bid for power in Malaya with an insurgent campaign of terrorism. (26:41) The British did not get deeply involved until 1950, it then took them a decade to defeat the insurgency.

This counterinsurgency was, and is today, a model of success. (26:42; 28:2) The formula for success was similar to that used by the British in their air control experiment, and that used in the Philippines. The power of the military and civilian sectors was closely coordinated to support the political goals of the nation. The winning strategy, as devised by British Lieutenant General Sir Harold Briggs, had three aims: (1) bring the population under effective administration and protection of the legitimate government; (2) expand the control of the police and local defense forces; and (3) establish a unified civilian, police, and military system of command and control for COIN operations. (27:120-121)

The keys to success under this strategy were: a coordinated intelligence network, a "hearts and minds" campaign, an integrated command system, and a goal of not injuring civilian noncombatants. (26:47; 27:127) In keeping with the last goal, offensive air power was seldom employed except to destroy insurgent camps, supply caches, and the fields where they grew their food. Air attacks were usually in support of ground troops. The RAF once estimated that each aerial attack on a guerrilla camp killed only one-third of a guerrilla (26:46; 28:20; 29:168)

Other air operations included air supply, evacuation, reconnaissance, liaison, Psy Ops, and what the British called "air movement" or what the U.S. Army today would call air mobile operations. Air supply and evacuation were vitally important to government troops who were pursuing insurgents deep into the tropical rain forest jungle. After the insurgents were forced into the jungle, aerial reconnaissance became the primary source of intelligence about their movements. Regional military commanders who worked in close cooperation with civilian authorities were given their own light observation aircraft which were used locally for reconnaissance, liaison, courier service, fast transportation, and target marking for attack aircraft. Psy Ops were extremely successful in encouraging insurgents to defect to the government side. (26:47; 27:126; 28:20-21; 29:168-169)

The British were the first to prove the utility of helicopters in a counterinsurgency. They used them in air movement operations to transport troops in and out of remote jungle locations. These operations greatly increased their tactical flexibility and allowed them to rapidly exploit opportunities to attack the insurgents by quickly moving, committing, or shifting reinforcements to decisive points. (27:126-127; 28:20; 29:169-170) The use of helicopters in Malaya did bring out again an important aircraft characteristic that had to be dealt with tactically. The MCP insurgents soon learned to listen for the noise of approaching helicopters and quickly disperse into the jungle. The British learned to land their patrols simultaneously in a large ring in an attempt to surround and trap the insurgents.

To quote British Lieutenant Colonel Rowland S. N. Mans, "Silence is golden in antiguerrilla operations..."(27:126,141)

Two COIN principles were reinforced in reviewing this conflict. They were: the need to use air power in support of political goals through close cooperation with civilian authorities, and the minimal use of offensive air attacks. A not so obvious, but important principle for air power planning purposes is the fact that a successful counterinsurgency may be a very protracted affair. Again, the missions of reconnaissance and liaison were important in providing intelligence and assisting in command and control of operations. The one mission this example adds to our list is the idea of air movement or air mobile operations using helicopters. The unique characteristics of helicopters, that make them so valuable in COIN operations can be added to our list of aircraft characteristics. The importance of silent operations was emphasized again.

Korea (1945-1953)

The U.S. after the end of WWII was an occupation force in Korea to disarm the Japanese and later as advisors to the Korean military. The Republic of Korea (ROK) fought an insurgency, which was sponsored and supported by the North Korean communists, from the end of WWII until 1948. During this time, the U.S. provided military aid and assistance through the Korean Military Advisory Group (KMAG). (30:101) In April of 1948, the North Korean communists pulled their insurgents out of South Korea and began a conventional attack in 1950. (30:54) In June of 1950,

the U.S. committed combat troops to South Korea to assist ROK forces to defeat a North Korean invasion that began that same month. (30:9)

When the U.S. Eighth Army entered South Korea, it established its own headquarters. It did not come under the control of the KMAG which remained a separate entity throughout the war. (30:101) By the time the Eighth Army had arrived in South Korea, the ROK army had virtually collapsed, the ROK government was in disorderly retreat, their economy had collapsed, and their social fabric had been torn to shreds.

(30:102,104) Rather than using U.S. troops to begin a major nation rebuilding, a distinct division of responsibilities between the ROK government and the U.S. forces was established. The ROK government took full responsibility for internal defense; for the fight against the North Korean insurgents, which continued throughout the war; and for nation rebuilding. They accomplished these tasks with the aid of KMAG, which continued to function, and with occasional conventional military help from the Eighth Army. The Eighth Army took responsibility for external defense and the repelling of external aggression. The problem of internal security was left to the ROK government and the role of U.S. forces was to protect South Korea from external attack. (30:47,101-104)

The reasons for mentioning this conflict are as follows: (1) this is another example of a conflict like the Greek civil war that began as an insurgency and transitioned to a conventional war; and (2) this conflict illustrates again the effectiveness of allowing the indigenous government to fight the insurgency and rebuild on their own terms using

external aid. The relevance of this account of the Korean conflict will become evident later when Vietnam is discussed.

Laos (1960-1973)

Laos a neutral Indochinese country was faced, from 1960 until the signing of a cease-fire in 1973, with a communist insurgency led by the Pathet Lao (PL). North Vietnam supported the PL with both military supplies and armed regular troops of the Vietnamese Army. The U.S. and Thailand supported Laotian government forces and the Laotian Meo tribe in a long and bloody COIN effort. The war was fought primarily in the heavily forested mountains between the Lao-North Vietnamese border and the two principal northern Laotian cities of Vientiane, the administrative capital, and Luang Prabang. A significant feature in the heart of this area is the Plain of Jars a grassy, upland plateau approximately 40 miles across. This plain is where most of the fighting took place. (26:128-130)

Direct support to the Meo tribesmen and the government of Laos, as led by Souvanna Phouma, was provided by a combination of the CIA, U.S. Army advisors, and a contingent of Thai military personnel. The Thai were estimated to be about 17,000 at their peak in 1972. At one time a four-hundred-men U.S. Army contingent of advisors was deployed to provide training and advice to the Lao forces. The U.S. personnel and operations were under the close control of the U.S. ambassador in Laos who coordinated the efforts of all U.S. agencies with the Laotian government. (24:27; 26:140,143,156)

Air power support to the counterinsurgency included light STOL aircraft, transport aircraft, forward air control aircraft (O-1s and O-2s), and helicopters all flown by CIA personnel. The light STOL aircraft probably contributed the most to the counterinsurgency by providing an indispensable transport and communication network for the Meo tribesmen. Meo tribesmen were used successfully in the forward air control aircraft as air guides providing targeting advice to the U.S. pilots. The U.S. provided T-28s (post-WWII training aircraft), along with training and support, to the Royal Lao Air Force for light attack and forward air control missions. Thai contingents of pilots also flew T-28s. (24:27; 26:160-161)

In 1965, the U.S. Air Force began regular bombing operations in Laos using A-1s, F-4s, F-105s, and B-52s from 7th and 13th Air Force bases in Thailand and A-7s and A-6s from the 7th Fleet in the Gulf of Tonkin. These aircraft were normally used to bomb North Vietnam and the Ho Chi Minh Trail, but some were diverted to aid in the counterinsurgency in Laos as secondary missions.

The most significant U.S. contribution in providing air power support was the decision to locate a navigational beacon and radar unit atop the 5,600 foot mesa of Phou Pha phi in the Sam Neua province of northern Laos near the Vietnamese border. Due to the rugged terrain and total lack of navigation facilities in Laos, this facility was invaluable in providing navigation support to forward air control, supply, and attack aircraft. It also served to aid the U.S. in its air war in North Vietnam. (26:160)

The use of U.S. and Thai air power served as an equalizer in the years between 1965 and 1968, making it possible for the Laotians to stop the heavily armed and supported PL and Vietnamese forces. (26:160) In 1968, the Vietnamese began to take the war in Laos seriously. The first to fall to their renewed support of the PL was the radar site at Phou Pha Thi where 13 Americans were killed. In 1969, North Vietnam committed their 316th Division to the war in Laos and by 1970 the Laotians had surrendered the Plain of Jars and were backed up to Long Tieng just short of Vientiane, where they managed to hold.

When the cease fire was declared in 1973, Laos was left in a stale mate with North Vietnam and the Pathet Lao communists. (24:27; 26:162-164) Note here that, despite massive support by U.S. air power, the Laotians were not able to win their COIN effort. The U.S. was satisfied with the effort because it was able to keep a neutral government in power in Laos and to tie down a considerable number of North Vietnamese troops. The Thais were happy with the outcome because they managed to prevent the formation of a communist government in Laos which shares a very long border with Thailand. (26:164-165)

The key air power principles that were reemphasized here included the importance of direct coordination of air efforts through the civilian/political system and the fact that massive offensive air support could not guarantee a victory. The establishment of a navigation facility as an air power support mission was an important factor in this conflict and the role of air guides was also a new

support mission. STOL capability, as an aircraft characteristic, proved to be invaluable in this counterinsurgency due to the rugged terrain.

Algeria (1954-1962)

Indigenous Algerians began a revolt on November 1, 1954 to gain rights denied them under French colonial rule. The revolution was a guerrilla war led by a small group of nationalists called the National Liberation Front. The war eventually led to a cease-fire on March 18, 1962 and Algeria was declared independent by France on July 3, 1962. (31:11) Despite the final result, the French were able to defeat the insurgency. In doing so they made effective use of air power, particularly helicopters, in fighting the Algerian insurgents.

One element of the French strategy, where air power was an important player, was in support of their "barrage." This was an extensive fence system to seal off the borders of Algeria from Tunisia where the insurgents had base camps and received extensive support. Aircraft supported ground patrols, provided supplies to outposts, and flew attack missions against intruders who breached the fence. (24:23-24)

Aircraft used included T-6s for light close air support, Corsairs and jet aircraft for heavy close air support, B-26s for bombing, and an assortment of light helicopters for reconnaissance and troop transport. (27:266) It was during this conflict that the French learned that supersonic jets were of little use in combating guerrillas in rural and mountainous terrain. That is one reason for their extensive use of the slower T-6 aircraft armed with machine guns and rocket pods. High technology does not always have a place in COIN operations. (32:97)

Reconnaissance was extremely important in the wide open desert spaces to find the enemy and keep track of the location of French troops. Reconnaissance aircraft were teamed with helicopters in hunter/killer operations. The reconnaissance aircraft would find the enemy, troops in helicopters would land to locate or trap them, and paratroopers would be brought in by cargo aircraft to fight the insurgents. (24:24; 27:264)

Helicopters were used in four kinds of operations: (1) enveloping and maneuvering, (2) quick changes in the area of maneuver, (3) speedy reaction to developing situations, and (4) full air-borne actions in the desert. For the first time, helicopters in Algeria were used in actual combat in addition to being used for troop transport. (29:170) The problems of night operations were partially solved by the French when they started the use of aerial flares. (27:260-261)

The French proved again the principle that air power used in close cooperation with ground troops can be very effective in defeating insurgents. They also expanded the missions for helicopters to include actual combat missions and added to the air power inventory the aerial flare mission for extending operations into the night. As far as aircraft characteristics are concerned, high technology is not always the answer, sometimes slower speed, maneuverability, and loiter time are important in a COIN operation in rural or mountainous terrain.

Oman (1964-1975)

In 1964, Omani communists, who later in 1974 became known as the Popular Front for the Liberation of Oman (PFL0), started an insurgency

in the Dhofar province of Oman. The current monarch, Sultan Qaboos bin Said, who took control of the country in 1970, defeated the Dhofar insurgency in late 1975 with military aid and assistance from Britain, Iran, and Jordan. (31:398)

Key features of Sultan Qaboos's successful counterinsurgency included: the use of small, mobile forces; an education and training program for the Oman military; an active civil action (hearts and minds) campaign to win over the people; the use of a blockade system to stop supplies to the PFLO from communist Yeman; and an internal governmental program of reform to redress insurgent claims of incompetency. (15:6-7)

Air power use was limited by Oman's inability to afford adequate air forces, therefore, air power was not a major contributor. The air force was used primarily in aerial reconnaissance, resupply, communications, and support for special forces. Air forces were used sparingly for attack and then only against known targets and enemy positions. Aircraft used included Skyraiders and Skyvans which provided the bulk of support, however, the use of helicopters also became an important element in supplying troop movements. The main users of helicopters in Omani combat were a contingent of Iranian special forces sent by the Shah in 1973. They were hampered, however, in their ability to find the insurgents by the noise of their helicopters which gave away their intentions. (15:8)

Here again, in a successful counterinsurgency, we see as a principle the limited use of air power in the offensive or attack role. As a

characteristic, the importance of quiet aircraft was emphasized again and we see the increasing use of helicopters for COIN operations.

Vietnam (1961-1973)

The wars in Korea and Vietnam had much in common. They both started essentially as communist insurgencies and ended as conventional wars. In both cases, the insurgent aspects continued to be present throughout the war but took a back seat to the conventional. (6:19) In Korea, the North Koreans removed their communist cadres in 1948 and began a conventional attack in 1950. The U.S. quickly responded with a strong conventional offensive which ultimately defeated the North Koreans. The North Vietnamese learned a lesson from the North Korean failure. They opened their offensive in South Vietnam with a guerrilla attack and kept up the insurgent pressure on the South Vietnamese government throughout the war even after they began conventional operations in South Vietnam. (30:54)

In Korea, as mentioned earlier, the U.S. forces concentrated on defeating the external rather than the internal threat. The problem of internal security was left to the Koreans and the U.S. limited its efforts to protecting South Korea from the external threat. (30:47) In Vietnam, instead of concentrating on the external threat--North Vietnam--the U.S. concentrated on the internal struggle or guerrilla war in South Vietnam. By following this COIN strategy, the U.S. failed to see the guerrilla war in South Vietnam as a North Vietnamese economy of force strategy to buy time and wear down U.S. military forces. (30:56) The U.S. was ultimately successful, at a great cost in material and

lives, in defeating the North Vietnamese conventional aggression. However, they never successfully defeated the internal insurgency and eventually in 1975 the government of South Vietnam fell to the North. Despite this failure, U.S. air power did contribute significantly toward the counterinsurgency and many new systems were developed.

The counterinsurgency can be divided into three periods. During the period from 1961 to 1963, the U.S. followed a strategy of social reform in which programs such as the Strategic Hamlet Program were used in an attempt at nation building. During this period, the U.S. put an immense amount of effort into the counterinsurgency but it was doomed to failure because the Diem government could not separate the rural population from the Viet Cong physically or psychologically and it would not make meaningful reforms. The type of aid sent to South Vietnam was too military orientated; the advisors advocated and taught the South Vietnamese Army conventional tactics instead of COIN tactics; and the U.S. role was broadened rather than encouraging the South Vietnamese to fight their own battles. (33:139-145)

In 1963, Diem was assassinated and the war entered a period of limbo until 1964 when the North Vietnamese escalated the war by sending in regular North Vietnamese Army forces. As U.S. Army Colonel Harry G. Summers, Jr., says in his book "On Strategy: The Vietnam War in Context," "Although it was not so dramatic, nor so obvious, as the North Korean invasion of South Korea in June 1950, the North Vietnamese had launched a strategic offensive to conquer South Vietnam." (30:55)

The next period in the counterinsurgency was from 1965 to 1968. This was the period when U.S. forces were building rapidly and the conventional war with North Vietnamese regulars was carried on in earnest. The COIN strategy continued with "search and destroy" operations carried out by conventional forces. (30:106; 33:146-153)

A turning point occurred after the Tet Offensive in January of 1968. From 1968 until the signing of the cease-fire agreement in January, 1973, the counterinsurgency was characterized by the withdrawal of U.S. troops and a program known as "Vietnamization." It was during this period with the forming of the Civil Operations and Revolutionary Development Support (CORDS) organization that meaningful progress was made toward countering the insurgency. A civilian organization, CORDS took control of the situation relegating the military to a support role, and through civic programs and close cooperation with the South Vietnamese authorities it was able to make some progress. The key of course was that finally the responsibility for internal defense was placed on the South Vietnamese government with help from the military. (19:152; 30:107; 33:154-168)

Through all three periods the USAF was criticized for the excessive use of aircraft in conventional attacks to support COIN efforts. These tactics were blamed for the alienation of the people, particularly in the rural areas where many villages were bombed, strafed, and napalmed.

In November of 1961, U.S. Air Force (USAF) special forces were sent to Vietnam to fight in the counterinsurgency. The types of aircraft that were sent were dictated by the operational requirements of COIN

operations. They included 4 C-47s, 4 B-26s, and 8 T-28s. Later A-1s, A-37s, AC-47s, AC-119s, AC-130s, and various types of helicopters were also added. Many people thought that some of these aircraft were too antiquated to be of any use. However, reliability, durability, and simplicity proved to be more valuable attributes than technology, sophistication, and speed in this COIN effort. These aircraft were also suitable because a prime requirement, at least in the beginning, was the need to train the Vietnamese Air Force to use them and eventually take over the task of providing air support. (24:26; 34:223-225)

The types of missions flown included those of previous COIN conflicts: reconnaissance, liaison, Psy Ops, transport, medical evacuation, observation, armed reconnaissance, forward air control, attack, and close air support. The use of helicopters in combat to support mobile operations was also brought to perfection. (4:220; 19:150; 34:225) Of course throughout the conflict, the total weight of the conventional U.S. air forces was placed at the disposal of those military commanders who were conducting the COIN campaign.

Several unique missions were perfected by U.S. airmen in support of COIN operations. The USAF introduced the "gunship" a cargo aircraft such as the C-47, C-119, or C-130 which was equipped with side or rear firing cannons or machine guns. These aircraft designated AC were extremely effective in providing close air support to troops in contact. (34:223-225) The USAF also used aerial flare aircraft to include a C-47 equipped with an arclight, low light telescopes, infrared scopes, and low light TV to rid the enemy of his ability to operate under the cover

of darkness. In what later became a very controversial mission C-130 aircraft were modified to spray defoliants, specifically "agent orange," over large areas of the jungle to deny the insurgents their cover.

Three important principles are illustrated here. First, prior to providing air power support to any counterinsurgency the situation should be examined closely to determine the stage of the insurgency. If it has not reached the third or conventional stage, then the extensive use of the offensive capability of air power will probably not solve the problem, in fact it may exacerbate the situation. Second, to be successful, air power should be used to support the political goals of the nation that is fighting the insurgency. Finally, any efforts of the military should be carefully coordinated with and controlled by the civilian government of the country being attacked. The responsibility for internal defense cannot be subsumed by an outside agency it must be the responsibility of the indigenous government.

Missions which were added to our list include: the use of AC-130 type aircraft for close air support; the role of aerial flare support was expanded and improved; and the use of aircraft for aerial spraying of defoliants was demonstrated, although this mission's effectiveness is doubtful.

This conflict, more than the others, illustrates the usefulness of "low tech" aircraft characteristics or older less complicated aircraft in a COIN effort. Another characteristic that is important in insurgent aircraft is adaptability to the talents of the indigenous population. The goal in any air power assistance effort should be to eventually turn

the control and operation of air forces over to indigenous personnel so that they can carry on their own defense.

Morocco (1975-present)

When Spain withdrew its colonial control of the Western Sahara in 1975, Morocco occupied the northern end of the territory which is contiguous with the southern border of Morocco. This occupation has been opposed by the Polisario (Popular Front for the Liberation of the Saguia el Hamra and Rio de Oro) an organization formed in 1969 to combat the Spanish colonization. The Polisario turned its guerrilla operations against the occupying Moroccans in 1975. Although the Algerians make no claim to the Western Sahara, the Polisario fight from bases in the Tindouf region of Algeria and receive support from Algeria and other communist countries such as Libya. This struggle may not be a classic insurgency, but insurgency/guerrilla tactics are used by the Polisario. It is presented in this paper as the most recent insurgency in order to illustrate some very important principles.

The U.S. does not recognize Morocco's claims to the Western Sahara and it has consistently supported efforts to end the war through negotiations. However, as a result of Polisario attacks into Morocco in 1979 the U.S. began a program of assistance to Morocco through arms sales. Those arms sales were approved to help maintain the military balance in the region. (31:359) The U.S. has provided F-5s, OV-10s, and Hughes Model 500 helicopters to the Moroccans. (3:39) The Royal Moroccan Air Force (RMAF) also has C-130s including one with side

looking airborne radar (SLAR) and two KC-130s for refueling; Mirage F-1 fighters; and a large fleet of assorted types of helicopters. (3:59-62)

The RMAF is much smaller than the Moroccan Army but it has played a key part in the counterinsurgency. It has been essential in denying the Polisario the freedom of movement so critical to their efforts in the rocky deserts of the Western Sahara. This success has led the Polisario to procure high technology antiaircraft guns and missiles in order to stop the RMAF. (3:41) Soviet SA-7 missiles appeared in the Polisario inventory of weapons in 1977, SA-9s and ZSU-23-4 antiaircraft artillery followed, and SA-6s appeared in October of 1981. (3:42,45,47)

The conflict can be divided into three phases. During the first phase from 1975 to 1979, the Moroccans fought primarily a defensive war against the Polisario, and the RMAF was basically ineffective. Their contribution, using C-130s, was mainly resupply of the Moroccan ground forces in forward cities and remote garrisons. (3:42)

The second phase from 1979 to 1981 was more of an offensive on the part of Morocco and the RMAF came into its own. One operation in support of a Moroccan garrison of 5,400 surrounded by 2,000 to 5,000 Polisarians, inflicted heavy casualties on the enemy when newly acquired Mirage F-1s with a night capability were used for night attacks on the Polisario forces. In 1980, the RMAF became an effective force because it began a close liaison with the Moroccan Army, and using a C-130 for command, control, and surveillance it began a series of attacks that seriously damaged the Polisario. The RMAF was able to make these

attacks despite the presence of SA-7s, SA-9s, and ZSU-23s because of effective tactics. (3:44-46)

The next phase began in 1981 and continues today. During the October 1981 attack on Moroccan forces in the Guelta Zemmour area, the Polisario introduced Soviet SA-6s. The RMAF lost its command and control C-130, two Mirage F-1s, and one F-5 to this very capable missile system. It had lost only four Mirage pilots in the whole conflict prior to this. The RMAF was shaken by this result and until January of 1982 it did not operate against the SA-6. Since January 1982, the RMAF has operated on a limited basis and the Moroccans have returned to a primarily defensive stance against the Polisario. (3:47,51)

Following the introduction of SA-6s into the theater, the Moroccans sought U.S. assistance in coping with the threat. The RMAF F-5s did not have radar warning receivers (RWRs), chaff, or flare dispensers. Their Mirages had RWR but did not have chaff or flare dispensers that could cope with the SA-6. The Moroccans also needed information about where the SA-6s were, how many there were, what their performance characteristics were, and what tactics to use against them.

The U.S. fell miserably short in trying to assist the Moroccans in defeating this sophisticated threat. A three man USAF training team sent to teach tactics to Moroccan F-5 pilots was unable to train them. It determined that Moroccan F-5 pilots would need a considerable amount of basic training before they could cope with SA-6s. The USAF pilots, unfamiliar with F-1s, were also unable to help the Mirage pilots. The pilots chosen for this team were unprepared. They had no special

training in how to deal with a third world air force; they did not understand the situation in Morocco; they could not speak French or Arabic, the two primary languages of Morocco; and they had no idea of the capability or proficiency of the Moroccan F-5 pilots. U.S. resources were used to provide intelligence about the SA-6s, but frequently timely intelligence did not reach Morocco in time to be effective. The U.S. was unable to provide electronic countermeasures (ECM) pods, chaff and or flare dispensers for F-5s due to diplomatic problems and the high cost of the equipment; and the U.S. was unable to provide this kind of equipment for the Mirages because it was incompatible. (3:67-69)

The first principle brought out by this example is that air power is most effective in a COIN effort when it is closely coordinated with the ground forces. The second principle is that if the U.S. intends to assist a nation in its counterinsurgency through training, the trainers should be well prepared for their task. Finally, if the U.S. is to provide useful military aid in the form of weapons or systems then those systems must be compatible with the existing indigenous systems and must be affordable. The only mission added to our counterinsurgency repertoire would be Morocco's use of a command and control aircraft to coordinate air and ground operations. However, this mission was also tried by the U.S. in Vietnam and proved to be very effective there. As far as aircraft characteristics are concerned, the U.S. should design COIN aircraft and ECM pods with current threats in mind and design ECM

Pods so that they are easily adaptable to any aircraft. Once again, the importance of being able to apply air power at night was emphasized.

General Principles

Many principles have been brought out in the discussions of individual COIN efforts presented above. There are several general principles that can be derived from studying all these conflicts as a whole.

The first step, whenever the U.S. is contemplating involvement in another country's counterinsurgency, should be to determine the competency of the indigenous government and its willingness to cooperate in making major reforms. The goal in our involvement should be to allow the host government to shoulder as much responsibility as possible in defending itself against internal aggression. (21:8) Air power should be used at the outset to support the political goals of the indigenous government.

The second general principle is that prior to any involvement in a counterinsurgency the U.S. should carefully analyze the insurgency to determine what stage or state the conflict is in. (33:169) This information can have a major impact on the kind and level of support that should be provided. The major pitfall to avoid is entering a counterinsurgency with massive use of conventional air power when the conflict has not progressed beyond the guerrilla stage. The result of such a miscalculation is normally to further alienate the population from the government.

As a third general principle, all air power planning should be done in coordination and cooperation with all other military, economic, and social/political planning. This should be done by a civilian/military planning organization controlled by the indigenous government and attended by representatives of the government from each branch involved in the COIN strategy.

If the U.S. wants to provide military help to another nation involved in a COIN situation, it will usually be faced with three options: (1) to provide direct aid to the country with training outside the country, (2) to provide assistance and training inside the country, and (3) to intervene. As a fourth general principle, the goal of the USAF should always be to provide the best training possible to the indigenous air force and avoid intervening if at all possible. (15:18; 20:74-75; 35:35-36) The USAF should have a strong COIN training program and maintain air force personnel who are competent and qualified to train third world pilots in all of the systems and missions we deem important for a successful counterinsurgency. These air force instructors should be mature, self-disciplined, self-motivating, and possess an aptitude for cross-cultural communication. (20:74)

Throughout all of the examples studied, there was consistently a need for timely and accurate intelligence. This is one area where the U.S. may be able to provide assistance using its satellites and strategic reconnaissance assets. In addition, though not mentioned, there is always a need for accurate weather information and forecasting which the U.S. can provide through its global weather system.

Finally, the services of systems such as the Global Positioning System (GPS) may contribute in the future. The fifth principle is that the U.S. can make use of its strategic/global systems as long as they appear transparent to the indigenous user. In other words, their use should be simple and not require extensive knowledge or training.

The final principle is that if conventional intervention becomes necessary in the course of a counterinsurgency then the U.S. should have a system for integrating conventional or strategic forces into the conflict. The integration should leave the original counterinsurgency apparatus intact and provide support to it in order to meet the enemy's conventional efforts head on.

CHAPTER III

CONCLUSION

"For to win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill."
Sun Tzu

In reviewing the history of counterinsurgency warfare, it becomes readily apparent that the use of air power is an important part of a COIN strategy. But, it is not the only nor the most important part. The center of gravity of an insurgency/counterinsurgency is the political-social system of the target country. Thus, political organizers become more important than military commanders, and other forms of national power, such as aid and trade, become more important than air power. (4:250) As revealed in several examples, the awesome firepower available through air power must often be held in check to avoid exacerbating the political-social situation. So, as Sun Tzu points out, the real skill in using air power in a COIN situation may be in finding ways to win without having to use it. (15:15) To develop a strategy to do that, we need to understand the principles of how to apply air power in a counterinsurgency.

Principles

Many principles can be listed for the effective prosecution of a counterinsurgency. Those listed here are derived from the historical examples studied, and apply to the use of air power. They are recommended as inputs to the writing of USAF aerospace doctrine for counterinsurgency. The list is arranged in what the author believes is

their priority, from most to least important. However, priority is not as important as considering them all in developing aerospace doctrine and strategy.

The primary purpose of air power should be to support the strategies of the political authorities in control of the indigenous government. Air power strategy should be subordinate to the social-political civilian strategy and air commanders should work in close cooperation with civilian authorities. The best method available for accomplishing this is the "country team" concept where ultimate responsibility for the involvement of U.S. forces is coordinated with all other forms of assistance through the office of the U.S. ambassador to the particular country. Under this concept, military assistance or integration of U.S. air forces is normally provided through a Military Assistance Group (MAG).

If intervention is necessary, the indigenous government and its forces should be encouraged to take responsibility for internal defense. U.S. air power should serve in a supporting role or for opposing external aggression. If it is necessary to intervene with conventional forces to oppose an external threat, those forces should be assigned to the country under their own headquarters and not under the control of a MAG.

Prior to any involvement in another country's counterinsurgency, their government and social-political system should be closely examined to determine if it is willing and able to make the reforms necessary to win support of the population away from insurgent forces. A successful

COIN operation is impossible without the support and willingness of the government of the majority of the people.

In addition to studying the government, the insurgency itself should be examined to determine its stage or state. This information is necessary to make an accurate decision on the appropriate air power response. To do this analysis, USAF personnel should be trained to understand and analyze an insurgency/counterinsurgency. Analysis should continue throughout a conflict. If the insurgency shifts to a conventional war, as often happens in the latter stages, it may be necessary to integrate conventional air forces into the theater.

Offensive air power can be awesome and cause collateral damage and death to innocent civilians. This damage, particularly when inflicted by U.S. air forces, may have a serious psycho-social impact on the indigenous population. It may also damage the support of Americans for such intervention. The goal of the USAF should be to not use offensive air power unless absolutely necessary. If required, it should be used discriminately and accurately. This means the USAF needs COIN attack aircraft and weapons that are accurate.

If the decision is made to provide training or military aid, it must be compatible with the level of competency of the indigenous forces. Any USAF personnel sent on training missions should be steeped in knowledge of: the language, customs, and capabilities of the target country; the social-political aspects of its insurgency; and the principles of aerospace doctrine for counterinsurgency. Any equipment provided should be: affordable; simple to operate; supportable; and

adaptable to the climate, the terrain, the existing indigenous air force resources, and the threat.

Whenever possible, air power should be used for humanitarian purposes to support the indigenous government's efforts to win the "hearts and minds" of its population. This may require the use of military aircraft in purely civilian applications. As stated before, if it is in direct support of the social-political strategy then it should be acceptable.

Air power in a COIN effort is most effective when used in close cooperation with ground forces. One of the best and most frequent uses of air power in an counterinsurgency is for liaison with and between ground force units and civilian authorities. Air power can be a major contributor to effective command and control of widely dispersed small units--the exact situation normally encountered in a counterinsurgency.

Air power is very effective in disrupting the normal life of the insurgents. Impersonal attacks from the air can have devastating psychological effects on the morale of irregular troops. Tactics for this type of warfare include blockades, inverted blockades, and attacks on base camps, training camps, food, and supplies. Insurgent troops can also be coerced through psychological operations such leaflet drops, loudspeaker broadcasts, and electronic broadcasts. The USAF has an excellent capability in the area of Psy Ops.

One of the prime requirements for a successful counterinsurgency, is accurate intelligence about the insurgents. Reconnaissance aircraft, that are well equipped with multiple sensors, stealthy, supportable in

austere conditions, and can loiter, can contribute significantly to the intelligence base. The USAF does not have such an aircraft. This is a major flaw in our force structure.

USAF planning for a COIN effort, should take into consideration the fact that a counterinsurgency may be a very protracted affair sometimes lasting decades. Knowing this and knowing the level of knowledge necessary to carry out a successful campaign, it might be wise to examine the old standard of performing such operations from a temporary duty status and consider approaching them on a more permanent basis.

To aid in command, control, and communications, the gathering of intelligence, and in providing weather data, the U.S. should use its strategic systems. The prerequisites to using them in a COIN situation are simplicity of use and no requirement for extensive knowledge or training.

Missions

To support the principles described above and any strategy or doctrine that might evolve out of their use, requires the capability to perform certain key roles or missions. The one area this paper has tried to avoid is tactics. But, obviously to effectively implement the following roles and missions, detailed tactics would be required. This represents an opportunity for another study of history to extract specific tactics for the employment of air power in COIN roles and missions.

The first and possibly the most important mission that aircraft can perform in counterinsurgency is reconnaissance. From the very first

recorded history of the use of air power in a COIN operation, the Mexican expedition, to the latest, in Morocco, reconnaissance has played an important part. As pointed out earlier, this is an area of special operations where the USAF lacks capability. The Air Force would have to use tactical reconnaissance assets such as RF-4s or adapt other aircraft for the role. Strategic reconnaissance assets could provide a partial solution. But, the best solution would be a specially designed and dedicated reconnaissance platform. The term platform is used because this is an area that might lend itself to the use of remotely piloted vehicles (RPVs).

As a close second in importance, the use of aircraft for liaison with and between ground forces can contribute considerably to effective command, control, and communications. This role is very useful in Third World countries where communication systems are scarce and in a COIN operation where small units of ground forces may be widely dispersed over hostile terrain.

The role of observation for aircraft is an older term that encompasses many modern missions today such as: forward air control, artillery spotting, patrol, and escort. It is an important mission that can contribute to the close cooperation required between air and ground forces in a COIN operation. As an aid to observation operations, the use of indigenous air-guides can help in providing a clear and timely link with the strategy of the indigenous government and in preventing serious accidents when the combat power of U.S. air or ground forces threatens innocent civilians. The USAF today has a limited capability

in OV-10s to perform observation and liaison type missions. There is a need in the inventory for a light aircraft with good VSTOL characteristics. Helicopters can be useful in this role. However, they are hampered by speed, range, density altitude restrictions, and they are noisy for those observation and liaison missions that require stealth. Again, this is a mission where RPVs might be used.

A key element in the execution of any COIN strategy is the use of aircraft for transport. Transport missions include: troop transport and supply either by direct insertion or by air drop; combat evacuation or medevac; and various humanitarian missions in support of the indigenous government. The USAF has been reduced to two choices of aircraft in this area either helicopters or C-130s. Neither choice covers all the needs of transport for speed, medium capacity, and VSTOL or STOL capability to get in and out of small undeveloped fields. This is an area where the proposed CV-22 tiltrotor aircraft can contribute.

Psychological operations were used in most of the conflicts studied. Psy Ops can contribute considerably to the psycho-social strategy of the indigenous government. They can also provide an alternative to ground or air attack in convincing the enemy to surrender or to give up their goals.

Attack missions are essential for any COIN operation. The primary attack mission is close air support (CAS). This is where the air force can be a tremendous support to ground forces. However, air attacks can also be used directly against enemy troop concentrations, base camps, training camps, and supplies. The type of mission envisioned here is a

light attack mission such as AC-130 gunships and attack helicopters can supply. The USAF has a gap here with no fixed wing light attack aircraft capability to support COIN operations. The usual mode is to provide this kind of support with tactical aircraft flying COIN tactics. Normally more damage is done than is absolutely necessary and the probability for collateral damage is increased.

Insurgents use darkness to hide their operations. They are normally a small force fighting a larger force and they have to rely on stealth and camouflage for survival. This fact has made the mission of aerial flare or aerial illumination an important contributor to COIN operations. This is a role or mission the USAF should not lose sight of (pun intended).

It will continue to be important, when operating in Third World countries, for the USAF to provide adequate navigation facilities if they are not available in country. This type of support is very important in aiding aircraft in bad weather to find remote sites in order to provide the kind of timely support that is required in a COIN situation. It can be an extremely demanding and hazardous mission, therefore, those air force personnel who do this kind of work must be highly trained and motivated.

The final two missions, heavy attack and the use of defoliants, have been used in the past. However, their use stirs tremendous controversy in a limited war or COIN situation. This makes their contribution less than desirable and one that should be avoided if at all possible.

Characteristics

The final area highlighted by this study was the search for the characteristics that are necessary for aircraft to perform COIN missions. Generally speaking the important characteristics for COIN aircraft fall into three categories that could be called the "S"ence of requirements. COIN aircraft should be simple, supportable, suitable, and survivable.

Simple

Although it is tantamount to anti-Americanism to state that "high technology might not be the answer," that is the case in COIN warfare. In looking at the characteristics that follow, it becomes apparent that they generally describe low technology aircraft or at least aircraft whose high technology features are transparent to the user or maintainer. This latter point is extremely important. It means that we do not have to shun high technology, we merely have to take the users and the environment into consideration when we design new systems if they are going to be used in COIN operations. The primary reasons behind the need for simplicity in aircraft are the capabilities of the Third World nations that would have to use and maintain them. This is a point about COIN operations that should be emphasized again. In a counterinsurgency, the goal of the U.S. should be to assist the indigenous government and forces through training and equipment and to leave the actual COIN operations to them to perform. Simple systems are easier for the target government and forces to learn to use and they are normally easier to maintain. Simple systems are also normally more

maintainable in the harsh climates and environments that exist in Third World countries. The characteristics of simplicity and supportability are closely related, so let us now take a look at supportability.

Supportable

Supportability as a characteristic means an aircraft or system should have a high degree of reliability and maintainability. The basics behind these concepts are respectively that the mean time between failure should be as long as possible and subsequently the mean time to repair should be as short as possible. To support the former requires systems that are simple, rugged, and durable under heavy use and abuse in a hostile environment. The later concept requires systems that are easy to test and can be repaired in the field with readily available and inexpensive parts. Maintainability should take into account the abilities of the indigenous personnel of Third World countries. The Soviets, who are big suppliers to Third World nations, have long been known for their ability to engineer or design systems to be simple with the fewest of moving parts.

Supportability should also take into consideration the usual lack of manpower, especially skilled maintenance manpower, and tools in Third World nations. Supportable COIN systems should require a minimum of manpower, skill levels, and tools. The supportability requirements of ruggedness and durability refer to the sometimes harsh climates that exist in Third World nations, such as, deserts, jungles, and mountainous terrain. COIN equipment should not only be adaptable to these varying types of terrain and climate but they should also be adaptable to

varying circumstances. This means that they should be simple enough for indigenous personnel to modify them to meet contingency situations.

Suitable

Elevation, range, and speed were the characteristics of aircraft that served General Pershing well in the Mexican expedition and continue to serve COIN commanders today. But, there are other more specific qualities that COIN aircraft should have to make them suitable for counterinsurgency operations.

In keeping with the principle of minimal violence, accurate weapons delivery is an important characteristic for attack aircraft. Guided weapons--wire, TV, infrared, and laser--and the aircraft to launch them hold great promise for the kind of precision necessary to limit collateral damage yet destroy the target. A whole new family of smart weapons, that can differentiate between, acquire, and attack targets, are also going to contribute to the COIN battlefields of tomorrow.

USAF aircraft should have the capability to operate at night. This is an important characteristic for all the various types of aircraft involved including attack, reconnaissance, liaison, and transport. Areas of modern technology that hold much promise here are night vision goggles, low light TV, and infrared technology. This capability will take away one of the insurgent's primary ways of hiding his operations.

For hauling purposes transport aircraft must have a suitable minimum capacity. What that is would make an excellent study, but judgment says it should be at least enough to insert a company of troops armed for insurgent warfare. Care must be taken in the selection of any transport

type aircraft to make sure it is big enough yet not too big to operate out of the austere fields of Third World countries. It should also be adaptable for a variety of roles including hauling cargo, troops, fuel, litter patients, and ammunition.

A related characteristic is the ability to get in and out of small remote fields. A VTOL or STOL capability is a very important aspect of airpower in a COIN operation. Helicopters can obviously add much to a COIN operation. However, they do have several drawbacks that detract from their suitability for COIN operations. They are complicated, expensive, hard to work on, and difficult to operate.

Another characteristic that all COIN aircraft could benefit from is the ability to loiter. COIN operations are typically not preplanned as in a conventional war. They are spontaneous reactions in response to developing situations. They normally require aircraft in support to hold and await the event or some signal from the ground that it is safe or that help is needed. Reconnaissance and observation aircraft must have this quality in a COIN situation if they are to catch the insurgents operating, because insurgent activities are clandestine and normally they do not gather in large formations. Of course, all of the aforementioned characteristics are wasted if simple, supportable, suitable, COIN aircraft are destroyed by the enemy. The next topic--survivability--is therefore of great importance.

Survivable

Survivability in COIN aircraft starts with the ability to operate quietly. They must avoid detection by indigenous troops whose primary

warning devices are their ears. This characteristic not only aids survivability but can also help reconnaissance, observation, and Psy Ops aircraft perform their missions effectively.

The next obvious survival characteristic is the ability to avoid or survive a ground to air attack. COIN aircraft will always be faced with the threat of ground fire from small caliber weapons and machine guns. To survive this threat, COIN aircraft should be rugged with redundant, simple, control systems and armor for key components. The USAF's A-10 is probably the premier example of an aircraft designed to survive this kind of threat. However, the defenses available to insurgents are becoming more and more sophisticated.

Sophisticated threats to COIN aircraft include: SA-7 and SA-14 Soviet hand held IR guided missiles, ZSU-23-4 radar guided antiaircraft guns, SA-2 radar guided missiles, and SA-6, and SA-8 command guided, with semiactive radar terminal homing missiles. Other and more sophisticated communist supplied threats appear every day. COIN aircraft could also have to face western systems such as British Rapier or U.S. Stinger missile systems captured by or supplied to insurgents. To combat these threats, COIN aircraft need to be equipped with the latest chaff and flare dispensers, RWR, and ECM systems. The best approach to defensive equipment would be to design it as self supporting pods that could be adapted to any aircraft. This would make it easier to help counterinsurgent countries that have a variety of aircraft, such as in the Morocco example.

Summary

In summary, there are two areas of technological innovation that hold great promise for the application of air power to counterinsurgency. They are tiltrotor and RPV technologies. If the tiltrotor aircraft lives up to its advanced billing, it could conceivably perform all the missions discussed above. For a very frank discussion of the merits and demerits of the tiltrotor aircraft and its probable contribution to counterinsurgency, see USAF Major Brian A. Maher's Air Command and Staff College Report titled The JUV Aircraft In Low Intensity Conflict. (36) The promise of RPVs is in their cost, supportability, and ease of use. They also do not require pilots with extensive training that might be lost in the high threat environments that RPVs can be sent into. A perfect example of an opportunity for their use would have been the Moroccan SA-6 problem. RPVs could have been used to locate, neutralize, and or destroy the SA-6 threat to Moroccan air operations.

APPENDIX

CONFLICT SPECTRUM

Employment of Force non-combat	Surgical Operations	Guerrilla I*	Guerrilla II**	Guerrilla III***	Vietnam Type	Limited Conv. War	General Conv. War	Nuclear War
--------------------------------------	------------------------	-----------------	-------------------	---------------------	-----------------	-------------------------	-------------------------	----------------

INTENSITY

LOW

HIGH

U.S. CREDIBILITY

ADEQUATE

LOW

HIGH

U.S. CAPABILITY

ADEQUATE

POOR

MODERATE

BEST

PROBABILITY OF CONFLICT

HIGH

LOW

LEGEND

* Guerrilla I: Weapons Assistance Teams—Police Training—Advisory Teams

** Guerrilla II: Special Forces Teams—Cadre for Indigenous Forces

*** Guerrilla III: Integration of U.S. Combat Units with Indigenous Forces

Conv. = Conventional

Chart adopted from similar chart by Dr. Sam C. Sarkesian. (4:238; 19:104,110; 20:21)
Probability of Conflict spectrum added by author.

LIST OF REFERENCES

1. Klare, Michael T. Beyond the "Vietnam Syndrome" U.S. Interventionism in the 1980s. Washington, D.C.: The Institute for Policy Studies, 1981.
2. Sarkesian, Dr. Sam C. "America and Third World Conflicts: Prospects for the Future." Conflict Quarterly, Vol. IV, No. 3, Summer, 1984, pp. 5-20.
3. Dean, Lieutenant Colonel David J. The Air Force Role In Low-Intensity Conflict. Maxwell AFB, Alabama: Air University, October, 1986.
4. Sarkesian, Dr. Sam C. America's Forgotten Wars-The Counterrevolutionary Past and Lessons for the Future. Westport, Connecticut: Greenwood Press, 1984.
5. Taylor, William J., JR., Maaranen, Steven A. and Gong, Gerrit W. Strategic Responses to Conflict in the 1980s. Lexington, Massachusetts: Lexington Books, 1984.
6. Taylor, William J., JR. and Maaranen, Steven A. The Future of Conflict in the 1980s. Lexington, Massachusetts: Lexington Books, 1982.
7. Weinberger, Caspar W. Annual Report to the Congress-Fiscal Year 1988. Washington D.C.: U.S. Government Printing Office, January, 1987.
8. Bond, Lieutenant Colonel Peter A., US Army. "In Search of LIC." Military Review, August, 1986, Vol. LXVI, No. 8, pp. 78-88.
9. Dallaire, Captain Kenneth F. "Low-Intensity Conflict: Thinking Beyond the SOF." Air Force Journal of Logistics, Vol. X, No. 3, Summer, 1986, pp. 15-16.
10. Zais, Major Mitchell M., US Army. "LIC: Matching Missions and Forces." Military Review, August, 1986, pp. 79, 89-99, in Air War College Readings DS-612, Department of Aerospace Doctrine and Strategy, Book 2, Air University, Maxwell Air Force Base, Alabama, November, 1987, pp. 1-5.
11. Low Intensity Conflict. Field Manual No. 100-20. Washington, D.C.: Headquarters Department of the Army, January, 1981.
12. Tactical Air Operations. TAC Manual 2-1. Langley AFB, Virginia: Department of the Air Force, HQ TAC, April, 1978.

13. Guide to the Analysis of Insurgency. A pamphlet distributed by the Central Intelligence Agency of the United States.

14. Sarkesian, Dr. Sam C. "Low-Intensity Conflict: Concepts, Principles, and Policy Guidelines." Air University Review, Vol. XXXVI, No. 2, January-February, 1985, pp. 4-23, in Air War College Readings DS-612, Department of Aerospace Doctrine and Strategy, Book 2, Air University, Maxwell Air Force Base, Alabama, November, 1987, pp. 12-22.

15. Olson, Dr. William J. "Air Power in Low-Intensity Conflict in the Middle East." Air University Review, Vol. XXXVII, No. 3, March-April, 1986, pp. 2-21.

16. Manning, Robert A. "Special Forces: Can They Do The Job?" U.S. News & World Report, November 3, 1986, pp. 36,38-39,41-42, in Air War College Readings DS-612, Department of Aerospace Doctrine and Strategy, Book 2, Air University, Maxwell Air Force Base, Alabama, November, 1987, pp. 31-34.

17. Jacobs, Gene and Young, Lewis P. "The Iranian Rescue Mission: An Analysis One Year Later." Asian Defence Journal, No.4, April, 1981, pp. 34-41, in Air War College Readings DS-612, Department of Aerospace Doctrine and Strategy, Book 2, Air University, Maxwell Air Force Base, Alabama, November, 1987, pp. 35-42.

18. Haas, Major Michael E. "23rd Air Force." Airlift, Vol. V, No. 2, Spring, 1983, pp. 7-9.

19. Sarkesian, Dr. Sam C. The New Battlefield-The United States and Unconventional Conflicts. Westport, Connecticut: Greenwood Press, 1986.

20. Hatch, Major Lewis M. The USAF In Low-Intensity Conflict: An Interdisciplinary Approach. Air University Report No. 83-1035, Maxwell AFB, Alabama, April, 1983.

21. Sarkesian, Dr. Sam C. U.S. Policy and Low-Intensity Conflict. New Brunswick, New Jersey: Transaction Books, Rutgers, 1981.

22. Lindsay, General James J., US Army. "The Quiet Professionals." Defense 87, November-December, 1987, pp. 48-52.

23. Koch, Noel C. "Is There a Role for Air Power in Low-Intensity Conflict?" Armed Forces Journal International, No. 122, May, 1985, pp. 32,36,38-39,42, in Air War College Readings DS-612, Department of Aerospace Doctrine and Strategy, Book 2, Air University, Maxwell Air Force Base, Alabama, November, 1987, pp. 23-26.

24. Alnwick, Colonel Kenneth J. "Perspectives on Air Power at the Low End of the Conflict Spectrum." Air University Review, Vol. XXXV, No. 3, March-April, 1984, pp. 17-28.

25. Jennings, Captain Kenneth A. "Sandino against the Marines." Air University Review, Vol. XXXVII, No. 5, July-August, 1986, pp. 85-89.
26. Blaufarb, Douglas S. The Counterinsurgency Era: U.S. Doctrine and Performance. New York: The Free Press, Division of Macmillan Publishing Company, 1977.
27. Greene, Lieutenant Colonel T. N. The Guerrilla-And How To fight Him. New York: Frederick A. Praeger, New York, 1962.
28. Cooper, Bert H., Jr. Malaya 1948-1960. pp. 1-26.
29. McCuen, Lieutenant Colonel John J., US Army. The Art Of Counter-Revolutionary War The Strategy of Counter-insurgency. Harrisburg, Pennsylvania: Stackpole Books, 1966.
30. Summers, Colonel Harry G., JR. On Strategy: The Vietnam War in Context. Carlisle Barracks, Pennsylvania: Strategic Studies Institute US Army War College, April, 1981.
31. Regional Issues - Background Notes. Department of National Security Affairs, Course 623. Maxwell AFB, Alabama: Air University, AY 1987-1988.
32. Evans, Ernest. Wars Without Splendor: The U.S. Military and Low-Level Conflict. New York: Greenwood Press, 1987.
33. Sarkesian, Dr. Sam C. Nonnuclear Conflicts in the Nuclear Age. New York: Praeger Publishers, 1980.
34. Cole, James L., Jr. "USAF Special Operations Forces: Past, Present, and Future." Aerospace Historian, Vol. 27, No. 4, Winter/December, 1980, pp. 218-226.
35. Daskal, Captain Steven E. "The Insurgency Threat and Ways to Defeat It." Military Review, Vol. LXVI, No. 1, January, 1986, pp. 28-41.
36. Maher, Major Brian. The JVC Aircraft in Low Intensity Conflict. Air University Report No. 84-1645, Maxwell AFB, Alabama, April, 1984.